

ETIC Jan 18 2022

SJ 33 Main study points

- 1) *the future capacity requirements of our state energy grid, including but not limited to the role and contribution of regional markets to that state requirement;*
 - 2) *the expected in-state technological sources of that generation capacity, considering delivered price, environmental stewardship, flexibility, and cost benefit;*
 - 3) *the impact of future electricity loads that may drive future capacity requirements, including electric transportation and increased electric water and space heating;*
 - 4) *the contributions of non-generation technologies to achieve a more efficient, lower-peak grid, including but not limited to utility-scale energy efficiency, demand side management, storage, and advanced meters; and*
 - 5) *the role of the private sector, regulated utilities, and state government in the development of the future grid.*
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Guidance by Trevor Graff, Legislative staffer

- 1) Are there issues now?
 - 2) What are future impacts?
 - 3) How is Utility positioning it self now
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Mark Reller R-E-L-L-E-R Mt. Liaison for BPA, Based here in Helena, MT

So much to say, so Little time. Trevor has my notes and some links.

Overview of a host of topics that pertinent. More detail if needed in Q&A. More than willing to speak or correspond with you after todays meeting.

BPA - Wholesale provider of Transmission Services and Power supply. 15K miles of High voltage , sell the power out of federally owned dams, including Libby and Hungry Horse. Our BA footprint includes parts of OR, ID, WA, MT, and small parts of NEV, WYO and Utah.

Issues for Legislature to know about

- 1) BPA has some old lines, built in the 1950's
 - a. We recently rebuilt the Kalispell to Kerr substation wood pole line

- b. We have on the books awaiting funding priority the Hot Springs to Garrison wood pole replacement and re-conductor project 120 miles, approx. \$70 M Plus cost to redo Fiber Optics. SEE Link Below **GOAL preserve reliability No new capacity SAFETY**
 - i. 29 miles of line (Garrison to Anaconda) we decided to not rebuild, as the small BPA load served in that area (4 MW) did not justify the cost of rebuild. We have sold that line and part of a substation to NorthWestern as of end of 2021.
- 2) PSPS Public Safety Power Shutoff
- a. Explain nature and need for BPA's new PSPS protocol - , first tested 2021
CRITERIA:
 - i. RED FLAG CONDITIONS, 60 MPH or greater winds, locational factors – fuel type and fuel loading
 - ii. Incident protocol, operational conditions, decision tree, notification tree
 - iii. Did informational sessions with MT DEQ ESF 12's in 2021
 - b. A risk assessment was done on MT line segments, and corrective actions taken to reduce incidence of PSPS in MT. Hardware replacement (potential failure points)
 - c. Explain PSPS does not automatically mean power interruption. It could , but system redundancies help reduce outage risk.
 - d. INSPECT before auto re-open Policy in effect now during fire season
- 3) Demands Changing on BPA's MT system.
- a. MRDAP process (recognized MT wind potential and started planning in 2018)
 - i. SEE attached MRDAP for list of action items. Did show T cap available.
 - ii. M2W (550 Mw) quick description and summary of current status
 - iii. Q TSEP MT projects summary (generically not my project name)

What we do have at the moment are 500 MW of TSRs that are awaiting certain elements related to Montana. We have the 180 MW of MT RAS enabled capacity,

Another 320 MW waiting for M2W to be completed. Not sure if those 320 MW will ultimately proceed to taking service, but they are still there in our queue.

My understanding is that M2W is finished with Preliminary Engineering, and is heading toward NEPA review, where another offramp will be provided to these subscribers if they so choose. But we are still awaiting updated project cost estimates, if my memory is accurate.

- iv. WE are doing some dynamic transfer - PSE wind is balanced in receiving BPA
- b. Colstrip 1 & 2 retirement –
 - i. Use change by PSE - Will move 300 MW of wind across their share of line
- c. Uncertainty on duration of Colstrip 3 & 4
 - i. Legacy contract at applies to the line is the Montana Intertie agreement which expires in 2027

- ii. BPA must signal intent of offer service and type of service by 2025
- iii. Currently internal conversation and discussion with Colstrip parties what if any changes may be included in 2025 offer.
 - 1. Taking regional perspective as we craft alternatives. Export functionality is important.
 - 2. Aware of SMR interest in MT.
- iv. Changes associated with wind resource instead of Coal resource?
 - 1. RAS requirements on wind to allow for safe ops of grid – RAS Remedial Action Schemes allow for dropping of generation to protect the Grid.

4) Regional changes

- a. EIM - BPA to functionally join in March 2022, doing shadow operations now to test systems functionality and provide system experience to marketers.

BPA will continue its EIM Implementation Workshop series on Jan. 27. This workshop will focus on updating topics to support EIM go-live in March. The series will include topics like EIM settlements training and discussions about potential reporting metrics. An agenda and materials for the Jan. workshop will be posted on the EIM [website](#) closer to the meeting date. Also, comments, BPA's response to comments and related information from the Nov. 17, 2021, workshop is now available on the EIM [website](#).

- i. BPA has been functionally engaged in the EIM since 2019, meaning members of the EIM half accessed the MARKET via BPA's transmission system. What is new is that BPA will become a member and materially transact in the market buying and selling from our trading floor.
- b. EDAM - Conversations and process engagement by BPA - Much more organized and robust approach for peer to peer sales than just a bilateral market.
- c. RTO - BPA receiving end of advocate lobbying, BPA reviewing our legal mandates and regional obligations.

Developing preliminary strategic direction

Participating in regional efforts to understand various market proposals

Two pronged engagement with customers/stakeholders

- d. *BPA/Public Power Forum – PPC invitation to all BPA public power customers and trade organizations*
- e. *BPA hosted informal discussion with all customers/stakeholders*
- f. Changes in use in transmission caused by Markets – short term use, seeking ways to avoid cost shifts to other parties caused by Market operations.

- 5) Regional Transmission planning - BPA participates
 - a. Northern Grid - melding of Columbia Grid and Northern Tier Transmission Group.
 - i. Relatively new group, working on development of regional Transmission plan
 - ii. Working on planning agreement - for new membership to approve
 - iii. Working on modeling capabilities, power flow analysis, and upDATE assumptions.
 - iv. Regional planning helps with cost allocation
- 6) Federal Infrastructure Bill.
 - a. BPA borrowing authority increased by \$10 B - NOT going to rush out and spend it, but it will help BPA meet priority needs in the coming decades.
 - b. Loaned BPA transmission VP to DOE to help coordinate work on national transmission needs.
 - c. Looking at other provisions in the bill that are available to help fund transmission work, to understand implications to BPA & regional utilities.
- 7) 2028 POWER Contract expiration (Potential for BPA served Load Change in MT? Across region?)
 - a. 20 year power supply contracts with MT cooperatives expire in 2028. What products and services they purchase beyond 2028 will inform grid needs in MT.
 - b. Post 2028 Western MT Coops we serve and other regional coops can continue with us, or buy from others, or self supply.
- 8) WRAP NWPP
 - a. BPA participating in the power pool's resource adequacy efforts, as well as doing internal reviews of RA needs. The programs will need transmission and BPA reviewing what if any needs these will impose on BPA grids.
 - b. Non binding phase Now and BPA is participating. Non-financially binding
 - c. Binding phase is next step, year or more away, financially binding
- 9) GRID MOD
 - a. Internal BPA systematic effort to modernize BPA's system. Expected outcome, is increases system visibility or system status. Should allow for increased efficacy of grid. Includes: Metering, switching, hardware, software etc.
 - b. Important to have grid modifications that allow for EIM, EDAM. Etc. EFFICIENT MARKET PARTICIPATION.
- 10) Contract options
 - a. Conditional firm quick explain of concept. Goal, Make T cap go further.
- 11) New Builds on the horizon?
 - a. As noted previously M2W could still occur with right condition.
 - i. One new sub, inside work at 5 substations, very short Taft re-conductor.
 - ii. Best case scenario 5 to 6 years out till energized.
 - b. If export demand was to dramatically increase out of MT. Garrison to Ashe line has been considered as a possible line build. NOT NEEDED AT THIS TIME Extremely capital intensive.

- c. Not in MT, but Boardman, ORE to Hemmingway, ID or B2H is still alive. BPA was partner early on, but now looking like a fully private build, but BPA will have access to capacity on that line.

LINKS OF INTEREST:

[Montana-Renewables-Development-Action-Plan-June-2018.pdf](#)

MR DAP

<https://www.bpa.gov/Projects/Initiatives/EIM/Pages/Energy-Imbalance-Market.aspx>

What is an energy imbalance market?

An energy imbalance market is a voluntary market that provides a sub-hourly economic dispatch of participating resources for balancing supply and demand every 5 minutes. This market is security-constrained, meaning transmission and reliability constraints would be honored.

The Western Energy Imbalance Market is operated by the California Independent System Operator. It is important to note that the Western EIM is not a regional transmission operator. BPA is not joining an RTO. BPA would preserve its autonomy and retain authority over transmission planning, day-ahead marketing, and transmission system and balancing authority operations if it were to join the EIM.

<https://www.bpa.gov/Projects/resource-adequacy/Pages/Resource-Adequacy.aspx>

BPA's Interest in Regional Resource Adequacy

BPA does not operate as an island; an outage in another balancing authority could lead to reliability issues on BPA's system, and there is longstanding uncertainty and risk associated with the resource adequacy status of our neighbors. A regional resource adequacy program:

- Provides a clear, uniform standard with accountability and commitment from each participant
- Puts bounds around how much capacity BPA is responsible for providing
- Creates transparency of individual resource and transmission plans

Creates potential for cost and resource savings through diversity benefits

Northwest Power Pool Western Resource Adequacy Program WRAP

<https://www.nwpp.org/about/workgroups/12>

see this link for program detail, minutes of past meetings, maps of participation.

[Hot Springs to Anaconda Transmission Line Rebuild Project \[Multiple counties, Montana\] \(bpa.gov\)](#)

Hot Springs to Anaconda Transmission Line Rebuild Project [Multiple counties, Montana]

BPA proposes to rebuild three 115-kV wood-pole transmission lines totaling approximately 151 miles between the communities of Hot Springs and Anaconda, Montana. Improvements would involve replacing all wood-pole structures (including poles and other hardware), replacing conductors and ground wires, and improving access roads.